

Appl. No. 10/024,783
Amendment and/or Response
Reply to Office action of 21 January 2005

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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) An electroluminescent device comprising:

a substrate;

an organic electroluminescent layer on the substrate;

a pattern-wise ink-jet printed electrode atop the electroluminescent layer on the substrate for supplying charges to an electroluminescent layer of the electroluminescent device,

the electrode comprising a metal or a metal alloy having a melting point of 250°C or less that is ink-jet printed in a molten form and being at least 5 µm thick.

2-3. (Canceled)

4. (Previously presented) ~~An~~ The electroluminescent device ~~as claimed in of~~ claim 1, wherein the electrode is an electrode for supplying electrons to the electroluminescent layer.

5. (Original) ~~An~~ The electroluminescent device ~~as claimed in of~~ claim 4, wherein the electrode has a work function of 4.5 eV or less.

6. (Currently amended) An electroluminescent device comprising:

a substrate;

an organic electroluminescent layer on the substrate;

a pattern-wise ink-jet printed electrode atop the electroluminescent layer on the substrate for supplying charges to an electroluminescent layer of the electroluminescent device,

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the electrode comprising a metal or a metal alloy having a melting point of 250°C or less that is ink-jet printed in a molten form and is at least 5 µm thick; and,
~~further comprising~~
a relief pattern for patterning the pattern-wise ink-jet printed electrode.

7. (Previously presented) ~~An~~ The electroluminescent device ~~as claimed in of~~ claim 1, wherein:

the device is a matrix display device of the passive type ~~comprising including~~ one or more electroluminescent layers sandwiched between row electrodes and column electrodes, and independently addressable electroluminescent elements being formed at crossings of row and column electrodes; and, wherein

the row electrodes are pattern-wise ink-jet printed electrodes comprising a metal or a metal alloy.

8. (Currently amended) A battery-operated and/or hand-held electronic device, ~~such as a mobile phone,~~ provided with an the electroluminescent device ~~as claimed in of~~ claim 1.

9. (Canceled)

10. (Currently amended) A method of manufacturing an electroluminescent device ~~comprising including~~ a metal or metal alloy electrode provided in accordance with a desired pattern, ~~said method~~ comprising:

forming one or more layers of organic electroluminescent material on a surface; and

subsequently ink-jet printing molten metal or metal alloy ~~on a surface in~~ accordance with the desired pattern ~~thus forming such that,~~ upon cooling of the molten metal or metal alloy ~~ink-jet printed onto the surface,~~ the metal or metal alloy electrode is formed atop the one or more layers of organic electroluminescent material.

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11. (Previously presented) The method of claim 10, further comprising forming a relief pattern on the surface to facilitate patterning the pattern-wise ink-jet printed electrode.

12. (Canceled).

13. (Previously presented) The method of claim 10, wherein the metal or metal alloy has a melting point of 250 °C or less.

14. (Previously presented) ~~An~~The electroluminescent device ~~as claimed in~~of claim 1, wherein the electrode has a work function of 4.5 eV or less.

15-16. (Canceled)

17. (Previously presented) ~~An~~The electroluminescent device ~~as claimed in~~of claim 6, wherein;
the device is a matrix display device of the passive type ~~comprising~~including one or more electroluminescent layers sandwiched between row electrodes and column electrodes, and independently addressable electroluminescent elements ~~being formed at crossings of row and column electrodes; and, wherein~~ the row electrodes include the pattern-wise ink-jet printed electrode.

18-20. (Canceled)

21. (Previously presented) The method of claim 11, wherein forming the relief pattern includes patterning of a photoresist material.

22. (Previously presented) The method of claim 10, wherein the metal or metal alloy has a melting point between 60 °C and 150 °C.

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23. (Currently amended) The method of claim 10, further including ink-jet printing a selection layer ~~on the surface to facilitate selective depositing of the metal or metal alloy upon the surface.~~

24. (Currently amended) The method of claim ~~10~~ 23, wherein the selection layer is printed ~~on the surface using an other pattern that is complementary to the desired pattern.~~

25. (Previously presented) The method of claim 24, wherein the selection layer comprises a photoresist layer.

26. (Currently amended) A method of manufacturing an electroluminescent device ~~comprising including~~ a metal or metal alloy electrode provided in accordance with a desired pattern, ~~said method comprising:~~

ink-jet printing a selection layer on the surface to facilitate selective depositing of the metal or metal alloy upon the surface; ~~[[,]]~~ and

applying the metal or metal alloy ~~allow~~ upon the surface in accordance with the desired pattern.

27. (Withdrawn) The method of claim 26, wherein the selection layer is printed on the surface using an other pattern that is complementary to the desired pattern.

28. (Withdrawn) The method of claim 27, wherein the selection layer comprises a photoresist layer.